

**Notice of Allowability**

Application No.

10/612,828

Applicant(s)

SARKELA ET AL.

Examiner

Art Unit

Navin Natnithadhha

3736

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 20 April 2005.
2. ☒ The allowed claim(s) is/are 1-26.
3. ☒ The drawings filed on 21 March 2005 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  6. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08),  
Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

### EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Peter T. Holsen on April 18, 2005.

The application has been amended as follows:

In claim 1, line 4, amend "such that is can" with - - to - -.

In claim 1, line 6, delete "can be optimized".

In claim 1, line 11, amend "such that is can" with - - to - -.

In claim 1, line 14, delete "can be optimized".

In claim 1, lines 20-22, amend "wherein the at least five electrodes are arranged such that at least two electroencephalography, frontal electromyography and eye movement signals can be distinguished from each other and a level of patient sedation can be assessed." with the following:

- - wherein the at least five electrodes are arranged to distinguish at least two electroencephalography, frontal electromyography and eye movement signals from each other and assess a level of patient sedation. - -.

In claim 11, line 4, amend "so that it can" with - - to - -.

In claim 11, line 6, delete "can be optimized".

In claim 11, line 10, amend "so that it can" with - - to - -.

In claim 11, line 13, delete "can be optimized".

In claim 11, lines 18-20, amend "wherein the at least five electrodes are arranged such that biopotential signals from both cortical hemispheres can be measured for functional comparison to detect non-symmetries between the hemispheres and eye movements can be detected." with the following:

- - wherein the at least five electrodes are arranged to measure biopotential signals from both cortical hemispheres for functional comparison to detect non-symmetries between the hemispheres, and to detect eye movements. - -.

In claim 18, line 4, amend "so that it can" with - - to - -.

In claim 18, line 6, delete "can be optimized".

In claim 18, line 11, amend "so that it can" with - - to - -.

In claim 18, line 14, delete "can be optimized".

In claim 18, lines 24-28, amend "wherein the at least seven electrodes are arranged such that at least two electroencephalography, frontal electromyography and eye movement signals can be distinguished from each other; biopotential signals from both cortical hemispheres can be measured for functional comparison to detect non-symmetries between the hemispheres; and eye movements can be detected." with the following:

- - wherein the at least seven electrodes are arranged to distinguish at least two of electroencephalography, frontal electromyography and eye movement signals from each other, and to measure biopotential signals from both cortical hemispheres for

functional comparison to detect non-symmetries between the hemispheres, and to detect eye movements. - -.

## REASONS FOR ALLOWANCE

2. The following is an examiner's statement of reasons for allowance:

In regards to independent claims 1, 11, and 18, both of the Bennett et al patents (US 6,233,472 B1; US 6,625,481 B2) teach positioning electrodes over the Frontalis, Corrugator, Orbiculari Occuli, Zygomatic, and Masseter muscle groups on one cortical hemisphere of the face (see fig. 12 in both patents) in order to stimulate and detect electrical signals. The purpose of this is to assess the level of paralysis or neuro muscular block of the facial muscles of a patient undergoing anesthesia. However, neither of these prior art references nor the prior art of record teach the arrangement of electrodes as claimed corresponding to both cortical hemispheres of the forehead of the patient to distinguish at least two of EEG, frontal EMG and eye movement signals from each other. Additionally, the prior art references do not teach measuring signals from the claimed electrode arrangement corresponding to both cortical hemispheres for functional comparison to detect non-symmetries between the hemispheres and eye movements.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Navin Natnithithadha whose telephone number is (571) 272-4732. The examiner can normally be reached on Monday-Friday, 8:00-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Max Hindenburg can be reached on (571) 272-4726. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Navin Natnithithadha  
Patent Examiner  
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18 April 2005



ROBERT L. NASSER  
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